

Maine Trawl Gear Characterization

Prepared by the Atlantic States Marine Fisheries Commission

1.1 TRAWLS

It is unlawful to use otter trawls, beam trawls, pair trawls, or midwater trawls to fish for herring within the territorial waters of Maine (DMRR 36.01).

1.1.1 Shrimp Otter Trawls

1.1.1.1 Gear Description

Trawl nets targeting Northern shrimp have a minimum mesh size of 1.75 inches (4.4 centimeters), and the maximum length of the bottom legs of the bridle cannot be longer than 15 fathoms (27 meters). The trawls must have a finfish excluder device (commonly referred to as the Nordmore Grate System). Maine regulations define the Nordmore Grate System as a rigid or semi-rigid planar device consisting of parallel bars attached to a frame with spacing between bars of not more than one inch (2.5 centimeters). The parallel bars of the grate shall be oriented up and down and the grate itself shall be tilted at approximately a 45-degree angle from the vertical plane. The frame of the grate shall be secured to the extension piece of the trawl net in such a manner that prevents the passage of fish between the frame of the grate and the webbing of the extension into the cod end. The fish outlet is a triangular opening in the webbing of the extension of the trawl. This outlet may be located on the top or bottom of the extension, which allows the escape of fish too large to pass between the bars of the grate. The triangular base of the fish outlet is aligned with the apex of the opening forward and is attached to the portion of the tilted grate closest to the cod end so that no lip or protruding edge of webbing is present to impede the escape of finfish. The base of the triangular opening shall not be less than 19 inches (48 centimeters) long. The sides of the triangular outlet shall taper to a forward (toward the mouth of the trawl) apex and shall be cut “all bars” to achieve the triangular shaped opening. A webbing funnel located in the extension in front of the grate is optional (DMRR 45.10).

1.1.1.2 Gear Deployment

Fishermen deploy shrimp otter trawls off the stern of the boat. Shrimp otter trawls are bottom trawls. The footrope of the trawl is weighted down with rockhoppers while the top of the trawl is lifted by the addition of cans (Mercer 2005, pers. comm).

1.1.1.3 Targeted Species

Shrimp otter trawls target northern shrimp.

1.1.1.4 Number of Licensed and Active Fishermen

There were 415 fishermen licensed to take shrimp in 2004. In January 142 fishermen were active, in February 147 fishermen were active, and in March 96 fishermen were active. These fishermen fished both shrimp otter trawls and shrimp traps (Mercer 2005, pers. comm).

1.1.1.5 Effort

The 2004 shrimp season went from January 19 to March 12. Fishermen took 639 trips in January, 1,105 trips in February, and 433 trips in March. These trips include those taken with both shrimp otter trawls and shrimp traps. The MDMR does not determine which gear fishermen

used in taking these trips. However, they do conduct shrimp port sampling. In 2004 the average minimum depth fished of fishermen sampled was 43 fathoms (79 meters) and the average maximum depth fished was 48 fathoms (88 meters). The average total hours trawled of fishermen sampled was eight, and the average number of tows was four (Mercer 2005, pers. comm). The geographic area and time of day fished was not provided for this report.

1.1.1.6 Status of the Fishery

In the last five years the total amount of northern shrimp landed in Maine decreased from 2000 to 2002, then increased in 2003 and 2004 (Table 1) (DMR 2006).

Table 1. Total amount of northern shrimp landed in Maine from 2000 to 2004.

Year	Tons Landed
2000	2,087
2001	902
2002	384
2003	972
2004	1,084

1.1.1.7 Sea Turtle Bycatch

Based on anecdotal information, Maine Department of Marine Resources personnel indicate that there have been no reports of sea turtle bycatch in northern shrimp otter trawls.

1.1.1.8 Laws and Regulations

The season for taking Northern shrimp is a 70-day season running sometime between December 19 and March 25 (DMRR 45.05). Trawl nets targeting Northern shrimp have a minimum mesh size of 1.75 inches (4.4 centimeters), and the trawls must have a finfish excluder device (commonly referred to as the Nordmore Grate System). The maximum length of the bottom legs of the bridle cannot be longer than 15 fathoms (27 meters) (DMRR 45.10).

1.1.2 Groundfish Trawls

1.1.2.1 Gear Description

The minimum mesh size for any otter or beam trawl is six inches (15 centimeters) diamond or 6.5 inches (17 centimeters) square mesh in the body and wings, and 6.5 inches (17 centimeters) diamond or square mesh in the cod end, except from January 1 to March 31 when targeting shrimp (DMRR 34.10). When targeting shrimp from January 1 to March 31 the minimum mesh size is 1.75 inches (4.4 centimeters) (DMRR 45.10). For a general description and diagram of a groundfish trawl see the gear appendix.

1.1.2.2 Gear Deployment

For a general description of how fishermen deploy groundfish trawls see the gear appendix.

1.1.2.3 Number of Licensed and Active Fishermen

Maine issues a commercial harvesters license to commercial fishermen, but does not license individuals or vessels by gear type. The number of licenses issued was not provided for this

report. Maine DMR personnel indicated that, for Maine-based vessels, groundfishing takes place almost entirely in federal waters. Only an extremely limited amount of groundfishing activity takes place within the state's waters.

1.1.2.4 Targeted Species

Groundfish species include Atlantic cod, haddock, yellowtail flounder, American plaice, witch flounder, winter flounder, Acadian redfish, white hake, pollock, windowpane flounder, ocean pout, and Atlantic halibut.

1.1.2.5 Effort

Groundfishing takes place almost entirely in federal waters. Only an extremely limited amount of groundfishing takes place in state waters and is not quantified, as fishermen in state waters are not required to report where their fishing activity took place (Mercer 2005, pers. comm). The State of Maine prohibits groundfishing in its territorial waters during April through June. From May 1 through June 30 fishermen may not fish for groundfish in the groundfish spawning closure in Boothbay and Sheepscot Bay, described in Department of Marine Resources Regulations 34.05. The depth, time of day, and geographical area fished was not provided for this report.

1.1.2.6 Status of the Fishery

Trends in effort and landings were not provided for this report, and no other information on trends in the Maine groundfish trawl fishery were available.

1.1.2.7 Sea Turtle Bycatch

There are no state-run observer programs in the groundfish fishery to evaluate sea turtle bycatch, and no other state-run observer program is conducted for the groundfish fishery in Maine. No other sea turtle bycatch information was available.

1.1.2.8 Laws and Regulations

Fishermen may not fish for whiting using any grate raised footrope trawl net. The minimum mesh size for any otter or beam trawl is six inches (15 centimeters) diamond or 6.5 inches (17 centimeters) square mesh in the body and wings, and 6.5 inches (17 centimeters) diamond or square mesh in the cod end, except from January 1 to March 31 when targeting shrimp (DMRR 34.10). When targeting shrimp from January 1 to March 31 the minimum mesh size is 1.75 inches (4.4 centimeters) (DMRR 45.10). The State of Maine prohibits groundfishing in its territorial waters during April through June. From May 1 through June 30 fishermen may not fish for groundfish in the groundfish spawning closure in Boothbay and Sheepscot Bay, described in Department of marine Resources Regulations 34.05.

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